

CLAIMS

1 1. A door jig assembly for use with a vehicle, the vehicle including
2 a door having an inner facing edge, through which is defined at least one
3 aperture, and opposing an inner door jamb forming a part of a vehicle door
4 frame, the door further capable of being pivoted about hinges secured to the
5 door frame and between opened and closed positions, said jig assembly
6 comprising:

7 an arcuate bracket portion fixedly secured to the inner door jamb;

8 a coil spring member surrounding an intermediate extending location of
9 said bracket portion, a first tab end of said coil spring biasingly engaging a
10 location along said bracket portion, a second end of said coil spring defining an
11 elongate extending stem portion passing through the aperture defined in the
12 vehicle door; and

13 a collar secured to a further location of said bracket portion and
14 exhibiting a cam surface in abutting contact with an arcuate extending surface
15 of said coil spring member;

16 said coil spring member influencing the door to remain in a first closed
17 position, rotation of the door to a second open position causing said coil spring
18 to rotate about said cam surface of said collar and to influence said door in an
19 opposite and door open position.

1 2. The door jig assembly as described in claim 1, said arcuate
2 bracket portion further comprising first and second legs extending from

3 opposite ends of said intermediate bracket portion, said legs engaging first and
4 second locations associated with the inner door jamb.

1 3. The door jig assembly as described in claim 2, said first leg
2 further comprising a lower leg terminating in a substantially “U” shaped and
3 perpendicularly extending portion, said “U” shaped portion aligning with an
4 aperture in the door jamb and through which is engaged a mounting bolt for
5 securing said first leg thereto.

1 4. The door jig assembly as described in claim 3, said bolt further
2 comprising an axially spaced collar and defining an annular recess
3 therebetween for seating said “U” shaped bracket portion and for spacing said
4 bracket portion from the inner door jamb.

1 5. The door jig assembly as described in claim 3, said second leg
2 further comprising an upper leg extending through a further spaced apart
3 aperture defined in the door jamb.

1 6. The door jig assembly as described in claim 5, said collar
2 securing to an upper end of said intermediate extending location of said bracket
3 portion and being rotatably restrained by said upper extending leg.

1 7. The door jig assembly as described in claim 1, said cam surface
2 associated with said collar further comprising a first circumferentially
3 extending and tapered location corresponding with said first closed position, a
4 succeeding second and cam lobe location corresponding with said second open
5 position.

1 8. The door jig assembly as described in claim 7, said closing and
2 opening influence positions corresponding to a substantially 90° rotation of the
3 door relative to the inner door jamb.

1 9. The door jig assembly as described in claim 1, further
2 comprising said coil spring extending stem portion biasing against an inside
3 surface of the vehicle door and exhibiting a cantilever load in said first and
4 second positions.

1 10. The door jig assembly as described in claim 1, said coil spring
2 member exhibiting a specified shape and size and being constructed from a
3 spring steel material.

1 11. The door jig assembly as described in claim 1, further
2 comprising a sleeve inserted between said intermediate extending location of
3 said bracket and said coil spring, said sleeve maintaining axial alignment
4 between said sleeve and said coil spring during rotation of the door.

1 12. A door jig assembly for use with a vehicle, the vehicle including
2 a door having an inner facing edge, through which is defined at least one
3 aperture, and opposing an inner door jamb forming a part of a vehicle door
4 frame, the door further capable of being pivoted about hinges secured to the
5 door frame and between opened and closed positions, said jig assembly
6 comprising:

7 an arcuate bracket portion fixedly secured to the inner door jamb, said
8 arcuate bracket portion further comprising first and second legs extending from
9 an intermediate extending location thereof;

10 a coil spring member surrounding said intermediate extending location
11 of said bracket portion, a first tab end of said coil spring biasingly engaging a
12 location along said bracket portion, a second end of said coil spring defining an
13 elongate extending stem portion passing through the aperture defined in the
14 vehicle door; and

15 a collar secured to a further location of said bracket portion and
16 exhibiting a cam surface in abutting contact with an arcuate extending surface
17 of said coil spring member, said cam surface further defining a first
18 circumferentially extending and tapered location corresponding with a first
19 door closed position, a succeeding second and cam lobe location corresponding
20 with a second door open position;

21 said coil spring member seating within the extending and tapered
22 location to influence the door to remain in said first closed position, rotation of
23 the door to a second open position causing said arcuate extending surface of

24 said coil spring to rotate about said cam surface of said collar, into said cam
25 lobe location, to thereby influence said door in an opposite and door open
26 position.

1 13. A door jig assembly for use with a vehicle, the vehicle including
2 a door having an inner facing edge, through which is defined at least one
3 aperture, and opposing an inner door jamb forming a part of a vehicle door
4 frame, the door further capable of being pivoted about hinges secured to the
5 door frame and between opened and closed positions, said jig assembly
6 comprising:

7 an arcuate bracket portion fixedly secured to the inner door jamb;

8 a coil spring member surrounding an intermediate extending location of
9 said bracket portion, a first tab end of said coil spring biasingly engaging a
10 location along said bracket portion, a second end of said coil spring defining an
11 elongate extending stem portion passing through the aperture defined in the
12 vehicle door; and

13 a cam surface established between an arcuate extending surface of said
14 coil spring member and an abutting surface associated with said bracket
15 portion;

16 said coil spring member influencing the door to remain in a first closed
17 position, rotation of the door to a second open position causing said coil spring
18 to rotate about said cam surface of said collar and to influence said door in an
19 opposite and door open position.